Small Business Innovation Research

INPUT SHAPING™ SOFTWARE FOR MACHINE CONTROL

Convolve, Inc.

New York City, NY

INNOVATION

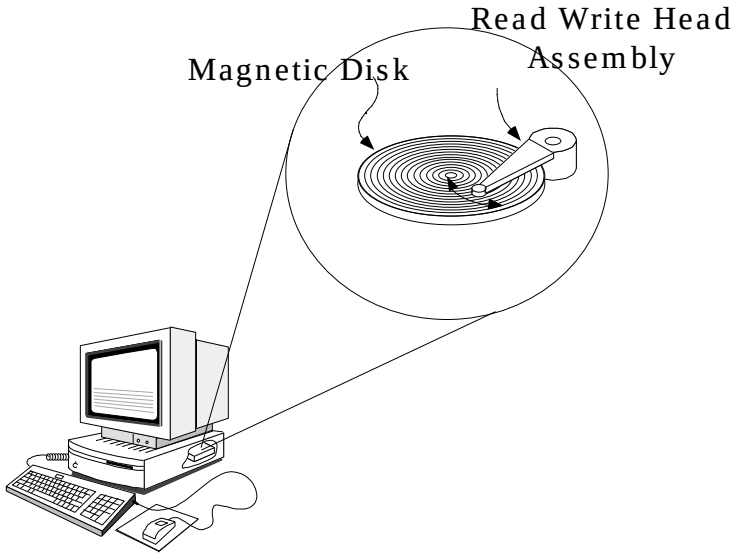
Developed Input Shaping™ commands to improve machine performance

ACCOMPLISHMENTS

- Performance improved by reducing vibration settling time.
- Method can be applied to new systems quickly.
- Developed Shaping Input commands to improve machine performance
- Method robust – insensitive to system or environmental changes.
- Commercial implementations available.
- Effectively eliminates sway on large crane systems.

COMMERCIALIZATION

- Seagate computer disk head testing machine over three times faster with Input Shaping™.
- Input Shaping™ software enables Seagate to more than double throughput of disk head manufacturing.
- Input Shaping™ has been implemented on a standard Programmable Logic Controller (PLC) and is now being sold as an anti-sway device for cranes as the No-Sway™ system.
- Signed a joint agreement with Polytec/PI for world-wide distribution of Input Shaping™ software.
- Anticipate sales of two hundred systems in the next 2 years.



Input Shaping™ Enables Seagate Computer Disk Head Testers to More Than Double Throughput

GOVERNMENT/SCIENCE APPLICATIONS

- Increased the performance of Space Shuttle Endeavor payload experiment (Mid-Deck Active Control Experiment, May 2, 1995).
- Available for use on upcoming space-bound payloads.
- Input Shaping™has been installed on large capacity cranes at the Department of Energy Savannah RiverSite and at Argonne National Labs.

Points of Contact:

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Goddard Space Flight Center

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